INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR QUALITY

Can Clay Corporation
402 Washington Street
Cannelton, Indiana 47520

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 123-9340-00001	
Issued by: Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: May 15, 2003 Expiration Date: May 15, 2008

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in Conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary structural clay pipe and flue manufacturing source.

Authorized Individual:	President
Source Address:	402 Washington Street, Cannelton, Indiana
Mailing Address:	402 Washington Street, Cannelton, Indiana
General Source Phone:	(812) 547-3461
SIC Code:	3298
County Location:	Perry
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Minor Source, under PSD or Rules; Minor Source, Section 112 of the Clean Air Act

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

(a) Two (2) raw material grinding processes, constructed prior to August 7, 1977, each controlled by one (1) integral baghouse, identified as baghouse A and baghouse B, capacity: 10.0 tons of clay per hour, each.

(b) One (1) tunnel kiln, firing sawdust, identified as TK1, constructed prior to August 7, 1977, capacity: 0.83 tons of clay per hour and 13.3 million British thermal units per hour.

(c) Six (6) periodic kilns, firing sawdust, identified as PK1 through PK5, constructed prior to August 7, 1977, capacity: 1.25 tons of clay per hour, each, and 20.0 million British thermal units per hour, each.

(d) Eight (8) wood-fired clayware dryers, identified as D1 through D8, constructed prior to August 7, 1977, capacity: 0.05 tons of clay per hour, each, and 0.80 million British thermal units per hour, each.

(e) Four (4) wood-fired space heaters, identified as H1 through H4, constructed prior to August 7, 1977, capacity: 0.40 million British thermal units per hour, each.

(f) One (1) wood grinding operation, controlled by a cyclone identified as Cycl-1, capacity: 4.0 tons of wood per hour.

(g) One (1) jointing operation, consisting of the application of polyurethane resin, capacity: 25,000 tons of clay per year.

SECTION B GENERAL CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to operate does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Permit Term and Renewal [326 IAC 2-6.1-7(a)] [326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions of this permit do not affect the expiration date.

The Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date. If a timely and sufficient permit application for a renewal has been made, this permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

B.5 Modification to Permit [326 IAC 2]

All requirements and conditions of this operating permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.6 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) Annual notification shall be submitted to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.

(c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Branch, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

(d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if

received by IDEM, OAQ, on or before the date it is due.

B.7 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each emissions unit:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP extension notification does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) A copy of the PMP's shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMP whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

B.8 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

(a) Permit revisions are governed by the requirements of 326 IAC 2-6.1-6.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1.

(c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.9 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)] [IC 13-14-2-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, when applicable) U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;

(c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.10 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

(a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch, within thirty (30) days of the change.

(b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).

(c) IDEM, OAQ, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

B.11 Annual Fee Payment [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing.

(b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, I/M & Billing Section), to determine the appropriate permit fee.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [40 CFR 52, Subpart P] [326 IAC 6-3-2]

(a) Pursuant to 40 CFR 52, Subpart P, the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

(b) Pursuant to 326 IAC 6-3-2(e)(2), the allowable particulate emissions rate from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.5 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions),

for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using good engineering practices (GEP) pursuant to 326 IAC 1-7-3.

C.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an “authorized individual” as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly

inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited, pursuant to the provisions of 40 CFR 61, Subpart M, is federally enforceable.

Testing Requirements

C.7 Performance Testing [326 IAC 3-6]

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date.

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14 days) prior to the actual date.

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ, not later than forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.8 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U.S. EPA.

Compliance Monitoring Requirements

C.9 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.10 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.11 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) Whenever a condition in this permit requires the measurement of total static pressure drop

across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

(b) Whenever a condition in this permit requires the measurement of a temperature or flow rate, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

(c) The Preventive Maintenance Plan for the pH meter shall include calibration using known standards. The frequency of calibration shall be adjusted such that the typical error found at calibration is less than one pH point.

(d) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

C.12 Compliance Response Plan - Preparation and Implementation

(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ, upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected time frame for taking reasonable response steps.

(2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:

(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or

(2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

(4) Failure to take reasonable response steps shall constitute a violation of the permit.

(c) The Permittee is not required to take any further response steps for any of the following

reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.

(3) An automatic measurement was taken when the process was not operating.

(4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.

(d) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected emissions unit while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1.

Record Keeping and Reporting Requirements

C.14 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.15 General Record Keeping Requirements [326 IAC 2-6.1-5]

(a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented when operation begins.

C.16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) Reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) Unless otherwise specified in this permit, any quarterly report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by an “authorized individual” as defined by 326 IAC 2-1.1-1(1).

(d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(a) Two (2) raw material grinding processes, constructed prior to August 7, 1977, each controlled by one (1) integral baghouse, identified as baghouse A and baghouse B, capacity: 10.0 tons of clay per hour, each.

(b) One (1) tunnel kiln, firing sawdust, identified as TK1, constructed prior to August 7, 1977, capacity: 0.83 tons of clay per hour and 13.3 million British thermal units per hour.

(c) Six (6) periodic kilns, firing sawdust, identified as PK1 through PK5, constructed prior to August 7, 1977, capacity: 1.25 tons of clay per hour, each, and 20.0 million British thermal units per hour, each.

(d) Eight (8) wood-fired clayware dryers, identified as D1 through D8, constructed prior to August 7, 1977, capacity: 0.05 tons of clay per hour, each, and 0.80 million British thermal units per hour, each.

(e) Four (4) wood-fired space heaters, identified as H1 through H4, constructed prior to August 7, 1977, capacity: 0.40 million British thermal units per hour, each.

(f) One (1) wood grinding operation, controlled by a cyclone identified as Cycl-1, capacity: 4.0 tons of wood per hour.

(g) One (1) jointing operation, consisting of the application of polyurethane resin, capacity: 25,000 tons of clay per year.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards

D.1.1 Particulate [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2, the particulate emission rate from each raw material grinding process shall not exceed 19.2 pounds per hour when operating at a process weight rate of 10.0 tons per hour.

(b) Pursuant to 326 IAC 6-3-2, the particulate emission rate from the one (1) tunnel kiln shall not exceed 3.62 pounds per hour when operating at a process weight rate of 0.83 tons per hour.

(c) Pursuant to 326 IAC 6-3-2, the particulate emission rate from each of the six (6) periodic kilns shall not exceed 4.76 pounds per hour when operating at a process weight rate of 1.25 tons per hour.

(d) Pursuant to 326 IAC 6-3-2, the particulate emission rate from the wood grinding operation shall not exceed 10.4 pounds per hour when operating at a process weight rate of 4.0 tons per hour.

The above pounds per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accom-

plished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.1.3 Particulate Control

In order to comply with Condition D.1.1, the baghouses for particulate control shall be in operation and control emissions from the raw material grinding processes at all times that the raw material grinding processes are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.4 Visible Emissions Notations

(a) Visible emission notations of the raw material grinding processes and the wood grinding operation stack exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a violation of this permit.

D.1.5 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses used in conjunction with the raw material grinding processes, at least once per shift when the raw material grinding process is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation and Implementation. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.6 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a violation of this permit.

(b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.

D.1.7 Cyclone Inspections

An inspection shall be performed each calendar quarter of all cyclones controlling the wood grinding operation when venting to the atmosphere. A cyclone inspection shall be performed within three (3) months of redirecting vents to the atmosphere and every three (3) months thereafter. Inspections are optional when venting to the indoors.

D.1.8 Cyclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a violation of this permit.

Record Keeping and Reporting Requirement [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.9 Record Keeping Requirements

(a) To document compliance with Condition D.1.4, the Permittee shall maintain records of once per shift visible emission notations of the raw material grinding processes and the wood grinding operation stack exhausts.

(b) To document compliance with Condition D.1.5, the Permittee shall maintain once per shift records of the total static pressure drop during normal operation when venting to the atmosphere.

(c) To document compliance with Condition D.1.7, the Permittee shall maintain records of the results of the inspections required under Condition D.1.7 and the dates the vents are redirected.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
FAX NUMBER - 317 233-5967

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES ?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100 TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ PHONE NO. :_____
LOCATION: (CITY AND COUNTY) _____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: ___
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____
__

DATE/TIME MALFUNCTION STARTED: _____/_____/ 20_____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION:

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 20____ AM / PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER:

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION:

MEASURES TAKEN TO MINIMIZE EMISSIONS:

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES:
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:
INTERIM CONTROL MEASURES: (IF APPLICABLE)

MALFUNCTION REPORTED BY: _____ TITLE:
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME:

*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

*** Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	**Can Clay Corporation**
Address:	**402 Washington Street**
City:	**Cannelton**
Phone #:	**(812) 547-3461**
MSOP #:	**123-9340-00001**

I hereby certify that Can Clay Corporation is **9** still in operation.
9 no longer in operation.

I hereby certify that Can Clay Corporation is
9 in compliance with the requirements of MSOP 123-9340-00001.
9 not in compliance with the requirements of MSOP 123-9340-00001.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for
a Minor Source Operating Permit (MSOP)

Source Background and Description

Source Name:	**Can Clay Corporation**
Source Location:	**402 Washington Street, Cannelton, Indiana**
County:	**Perry**
SIC Code:	**3298**
Operation Permit No.:	**MSOP 123-9340-00001**
Permit Reviewer:	**Edward A. Longenberger**

The Office of Air Quality (OAQ) has reviewed an application from Can Clay Corporation relating to the operation of a structural clay pipe and flue manufacturing source.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) Two (2) raw material grinding processes, constructed prior to August 7, 1977, each controlled by one (1) integral baghouse, identified as baghouse A and baghouse B, capacity: 10.0 tons of clay per hour, each.

(b) One (1) tunnel kiln, firing sawdust, identified as TK1, constructed prior to August 7, 1977, capacity: 0.83 tons of clay per hour and 13.3 million British thermal units per hour.

(c) Six (6) periodic kilns, firing sawdust, identified as PK1 through PK6, constructed prior to August 7, 1977, capacity: 1.25 tons of clay per hour, each, and 20.0 million British thermal units per hour, each.

(d) Eight (8) wood-fired clayware dryers, identified as D1 through D8, constructed prior to August 7, 1977, capacity: 0.05 tons of clay per hour, each, and 0.80 million British thermal units per hour, each.

(e) Four (4) wood-fired space heaters, identified as H1 through H4, constructed prior to August 7, 1977, capacity: 0.40 million British thermal units per hour, each.

(f) One (1) wood grinding operation, controlled by a cyclone identified as Cycl-1, capacity: 4.0 tons of wood per hour.

(g) One (1) jointing operation, consisting of the application of polyurethane resin, capacity: 25,000 tons of clay per year.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment

There are no new facilities proposed at this source during this review process.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) OP 62-05-85-0073, issued on July 10, 1981; and

(b) OP 62-06-90-0083, issued on October 31, 1986.

All conditions from previous approvals were incorporated into this permit.

Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justification such that the baghouses be considered as an integral part of the raw material grinding process:

(a) The baghouses were originally installed in the 1960's and 1970's to ensure that fine clay particulate were included in the process clay prior to entering the extrusion process. Without adequate fines in extrudeable clay, the process fails to make good products. The fine clay particles provide for smoother running mix, which provides for smoother exteriors to the final product and a tighter, stronger clay body.

(b) The raw material grinding process is not operated without proper operation of the baghouses. Proper baghouse operation is monitored and if it falls out of operating parameters, the raw material grinding process exhaust systems are terminated until the baghouse is returned to service. Per Can Clay Corporation work instruction form WI019, “If the vacuum reading is not within proper operating range, immediately shutdown the grinding operation, notify the Production Superintendent and initiate repairs.”

IDEM, OAQ has evaluated the justifications and agreed that the baghouses will be considered as an integral part of the raw material grinding process. Therefore, the permitting level will be determined using the potential to emit after the baghouses. Operating conditions in the proposed permit will specify that these baghouses shall operate at all times when the raw material process is in operation.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on December 29, 1997.

Emission Calculations

(a) For the one (1) wood grinding operation, controlled by a cyclone identified as Cycl-1:

Particulate collected by cyclone: 77 lbs/day
Collection efficiency of cyclone: 95%

Potential particulate emissions:

(77 lbs/day) x (1 day/24 hrs) x (8760 hrs/year) x (1 ton/2000 lbs) / 95% = **14.8** tons per year

(b) Potential emissions from the jointing process includes less than one ton per year of VOC and total HAPs.

(c) See pages 1 through 4 of 4 of Appendix A of this document for detailed emissions calculations.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	**Potential To Emit** (tons/year)
PM	61.4
PM_{10}	49.0
SO_2	3.28
VOC	4.68
CO	28.3
NO_X	24.8

HAPs	**Potential To Emit** (tons/year)
HF	9.63
HCl	1.10
Acetaldehyde	0.298
Acrolein	0.105
Benzene	0.156

HAPs	Potential To Emit (tons/year)
N,N-Dimethylaniline	0.047
Dimethyl phthalate	0.007
Epichlorohydrin	0.009
Formaldehyde	0.336
Hydroquinone	0.009
Methanol	0.121
MEK	0.121
Phenol	0.134
Styrene	0.364
Toluene	0.125
Xylene	0.063
Arsenic	0.0001
Chromium	0.007
Lead	0.0003
Manganese	0.009
Nickel	0.0002
TOTAL	12.8

The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM and PM_{10} are greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1999 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	not reported
PM_{10}	5.00
SO_2	0.00
VOC	5.00
CO	3.00
NO_X	2.00
HAP	not reported

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)						
Process/facility	**PM**	**PM_{10}**	**SO_2**	**VOC**	**CO**	**NO_X**	**HAPs**
Raw material grinding	26.1	16.3	-	-	-	-	-
Tunnel kiln	3.38	3.09	2.44	0.087	5.82	1.35	1.00
Periodic kilns	2.13	1.12	-	0.329	4.93	16.4	9.03
Dryers	12.1	10.9	0.670	2.61	14.0	5.61	1.38
Wood grinding	14.8	14.8	-	-	-	-	-
Jointing	-	-	-	1.00	-	-	1.00
Space heaters	3.01	2.73	0.170	0.650	3.50	1.40	0.346
Total Emissions	61.4	49.0	3.28	4.68	28.3	24.8	12.8

County Attainment Status

The source is located in Perry County.

Pollutant	Status
PM_{10}	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Perry County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Perry County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than one hundred (100) tons per year,

(b) a single hazardous air pollutant (HAP) is less than ten (10) tons per year, and

(c) any combination of HAPs is less than twenty-five (25) tons per year.

This status is based on all the air approvals issued to the source. This status has been verified by the OAQ inspector assigned to the source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14, 326 IAC 20, 40 CFR 61 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Perry County and the potential to emit of PM_{10}, SO_2, VOC, CO and NO_X are each less than one hundred (100) tons per year, therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

(a) Pursuant to 326 IAC 6-3-2, the particulate emission rate from each raw material grinding process shall not exceed 19.2 pounds per hour when operating at a process weight rate of 10.0 tons per hour.

This limitation is based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The associated baghouse shall be in operation at all times each raw material grinding process is in operation, in order to comply with this limit.

(b) Pursuant to 326 IAC 6-3-2, the particulate emission rate from the one (1) tunnel kiln shall not exceed 3.62 pounds per hour when operating at a process weight rate of 0.83 tons per hour.

This limitation is based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The particulate emissions from the one (1) tunnel kiln are 0.772 pounds per hour which is less than the allowable particulate emission rate of 3.62 pounds per hour. Therefore, the one (1) tunnel kiln is in compliance with this rule.

(c) Pursuant to 326 IAC 6-3-2, the particulate emission rate from each of the six (6) periodic kilns shall not exceed 4.76 pounds per hour when operating at a process weight rate of 1.25 tons per hour.

This limitation is based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The particulate emissions from each of the six (6) periodic kilns are 0.081 pounds per hour which is less than the allowable particulate emission rate of 4.76 pounds per hour. Therefore, the six (6) periodic kilns are in compliance with this rule.

(d) The particulate emissions from each of the eight (8) clayware dryers are less than 0.551 pounds per hour. Therefore, pursuant to 326 IAC 6-3-1(b), the eight (8) clayware dryers are exempt from the requirements of 326 IAC 6-3-2.

(e) Pursuant to 326 IAC 6-3-2, the particulate emission rate from the wood grinding operation shall not exceed 10.4 pounds per hour when operating at a process weight rate of 4.0 tons per hour.

This limitation is based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The particulate emissions from the wood grinding operation are 3.38 pounds per hour which is less than the allowable particulate emission rate of 10.4 pounds per hour. Therefore, the wood grinding operation is in compliance with this rule.

Conclusion

The operation of this structural clay pipe and flue manufacturing source shall be subject to the conditions of the attached proposed Minor Source Operating Permit **123-9340-00001**.

Appendix A: Potential Emission Calculations

Company Name: **Can Clay Corporation**
Address City IN Zip: **402 Washington Street, Cannelton, Indiana 47520**
MSOP: **123-9340**
Plt ID: **123-00001**
Reviewer: **Edward A. Longenberger**
Date: **December 29, 1997**

Emission Unit **SCC# 3-05-003-02**
Raw Material Grinding - A

Pollutant	Maximum Clay Throughput (tons/hr)	Emission Factor (lbs/ton)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate * (lbs/hr)	Controlled Emission Rate * (tons/yr)
PM	10.000	8.500	85.000	372.300	96.00%	3.400	14.892
PM-10	10.000	5.320	53.200	233.016	96.00%	2.128	9.321

Emission Unit **SCC# 3-05-003-02**
Raw Material Grinding - B

Pollutant	Maximum Clay Throughput (tons/hr)	Emission Factor (lbs/ton)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate * (lbs/hr)	Controlled Emission Rate * (tons/yr)
PM	10.000	8.500	85.000	372.300	97.00%	2.550	11.169
PM-10	10.000	5.320	53.200	233.016	97.00%	1.596	6.990

Emission Unit **SCC# 3-05-003-10**
Tunnel Kiln

Pollutant	Maximum Clay Throughput (tons/hr)	Emission Factor (lbs/ton)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	0.830	0.930	0.772	3.381	0.00%	0.772	3.381
PM-10	0.830	0.850	0.706	3.090	0.00%	0.706	3.090
SO2	0.830	0.670	0.556	2.436	0.00%	0.556	2.436
NOx	0.830	0.370	0.307	1.345	0.00%	0.307	1.345
VOC	0.830	0.024	0.020	0.087	0.00%	0.020	0.087
CO	0.830	1.600	1.328	5.817	0.00%	1.328	5.817
HF *	0.830	0.264	0.219	0.960	0.00%	0.219	0.960
HCl *	0.830	0.011	0.009	0.040	0.00%	0.009	0.040

Emission Unit **SCC# 3-05-003-14 Periodic Kilns**

Pollutant	Maximum Clay Throughput (tons/hr)	Emission Factor (lbs/ton)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	7.500	0.065	0.488	2.135	0.00%	0.488	2.135
PM-10	7.500	0.034	0.255	1.117	0.00%	0.255	1.117
SO2	7.500	0.000	0.000	0.000	0.00%	0.000	0.000
NOx	7.500	0.500	3.750	16.425	0.00%	3.750	16.425
VOC	7.500	0.010	0.075	0.329	0.00%	0.075	0.329
CO	7.500	0.150	1.125	4.928	0.00%	1.125	4.928
HF *	7.500	0.264	1.980	8.672	0.00%	1.980	8.672
HCl *	7.500	0.011	0.083	0.361	0.00%	0.083	0.361

Summary of Potential Emissions

Emission Units	PM (tons/yr)	PM-10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	HF (tons/yr)	HCl (tons/yr)
Raw Material Grinding - A	14.9	9.32	0.00	0.00	0.00	0.00	0.00	0.00
Raw Material Grinding - B	11.2	6.99	0.00	0.00	0.00	0.00	0.00	0.00
Tunnel Kiln	3.38	3.09	2.44	1.35	0.087	5.82	0.960	0.040
Periodic Kilns	2.14	1.117	0.00	16.4	0.329	4.93	8.67	0.361
Clayware Dryers	12.1	10.9	0.670	5.61	2.61	14.0	0.00	0.561
Space Heaters H1 - H4	3.01	2.73	0.170	1.40	0.650	3.50	0.00	0.140
Wood Grinding	14.8	14.8	0.00	0.00	0.00	0.00	0.00	0.000
Jointing	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.000
Total	**61.4**	**49.0**	**3.28**	**24.8**	**4.68**	**28.3**	**9.63**	**1.10**

METHODOLOGY

Uncontrolled Emission Rate (lbs/hr) = Throughput (tons/hr) x EF (lbs/ton)

Uncontrolled Emission Rate (tons/yr) = Throughput (tons/hr) x EF (lbs/ton) x 8760 (hrs/yr) / 2000 (lbs/ton)

Controlled Emission Rate (lbs/hr) = Throughput (tons/hr) x EF (lbs/ton) x (1-Control Eff)

Controlled Emission Rate (tons/yr) = Throughput (tons/hr) x EF (lbs/ton) x (1-Control Eff) x 8760 (hrs/yr) / 2000 (lbs/ton)

Allowable Emissions represent the allowable PM emission rate pursuant to 326 IAC 6-3-2.

All emission factors taken from AP-42 Ch 11 Sec 3, and/or FIRES Version 6.23 unless otherwise noted.

* Note that the baghouses associated with the raw material grinding processes have been determined to be integral to the process.

* The HF and HCl emission factors are based on the results of a laboratory sampling of the clay used at Can Clay Corporation. The analysis was performed by Mission Clay Products, in October 1999.

Appendix A: Emission Calculations
Wood Combustion

Company Name: Can Clay Corporation
Address City IN Zip: 402 Washington Street, Cannelton, Indiana 47520
MSOP: 123-9340
Plt ID: 123-00001
Reviewer: Edward A. Longenberger
Date: December 29, 1997

Emission Unit	Capacity
space heaters	4 x 0.4 MMBtu/hr
clayware dryers	8 x 0.8 MMBtu/hr
Total	**8.0 MMBtu/hr**

Heat Input Capacity (MMBtu/hr): 8.0

Moisture (%): 30.0 Wet wood has a moisture content of 20% or more

Fuel Type	Pollutant **Uncontrolled Emissions**	PM*	PM10	SO2	NOx	VOC	CO	Lead
Wet Wood	Uncontrolled Emission Factor in lb/MMBtu	0.43	0.39	0.024	0.20	0.093	0.50	0.000048
Wet Wood	Uncontrolled Potential Emission in tons/yr	15.07	13.67	0.84	7.01	3.26	17.52	0.00

* PM is filterable only. The emission factor for condensible (PM10) is an additional 0.016 lb/MMBtu

Emission Factors for PM, PM-10, NOx and CO change based on the type of wood burned. Emission factors are as follows:
Bark: PM 0.56 lb/MMBtu, PM-10 0.20 lb/MMBtu, NOx 0.20 lb/MMBtu, CO 0.72 lb/MMBtu
Bark and Wet Wood: PM 0.56 lb/MMBtu, PM-10 0.50 lb/MMBtu, NOx 0.20 lb/MMBtu, CO 0.68 lb/MMBtu
Dry Wood: PM 0.39 lb/MMBtu, PM-10 0.50 lb/MMBtu, NOx 0.45 lb/MMBtu, CO 0.61 lb/MMBtu
Wet Wood: PM 0.43 lb/MMBtu, PM-10 0.39 lb/MMBtu, NOx 0.20 lb/MMBtu, CO 0.50 lb/MMBtu

Methodology
AP-42 Heating Value of Wood = 4500 Btu/lb
Emission Factors from AP-42, Chap. 1.6, September 1999 Review Draft
Emission (tons/yr) = Heat Input Capacity (MMBtu/h) X Emission Factor (lb/MMBtu) X 8,760 hrs/yr X [1 ton/2000 lbs]

Appendix A: Emission Calculations
Wood Waste Combustion in Space Heaters
HAPs Emissions

Company Name: Can Clay Corporation
Address City IN Zip: 402 Washington Street, Cannelton, Indiana 47520
MSOP: 123-9340
Plt ID: 123-00001
Reviewer: Edward A. Longenberger
Date: December 29, 1997

HAPs - Organics

	Acetaldehyde	Acrolein	Benzene	Formaldehyde	Hydrogen Chloride	Styrene
Emission Factor in lb/MMBtu	8.5E-03	3.0E-03	3.9E-03	9.6E-03	2.0E-02	1.9E-03
Potential Emission in tons/yr	2.98E-01	1.05E-01	1.37E-01	3.36E-01	7.01E-01	6.66E-02

HAPs - Metals

	Arsenic	Chromium	Lead	Manganese	Nickel	Total HAPs
Emission Factor in lb/MMBtu	2.0E-05	9.3E-04	4.8E-05	1.4E-03	3.0E-05	
Potential Emission in tons/yr	7.01E-04	3.26E-02	1.68E-03	4.91E-02	1.05E-03	1.73E+00

Methodology is the same as page 1.

The six highest organic HAPs and the five highest metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.6.